

04-18-06

EXPRESS MAIL NO. EV529804626US

# ITW



# TRANSMITTAL FORM

(To be used for all correspondence  
after initial filing)

Application Number	10/706,275
Filing Date	November 13, 2003
First Named Inventor	George H. Lowell
Art Unit	1645
Examiner Name	Nita M. Minnifield
Attorney Docket No.	484112.413

## ENCLOSURES (check all that apply)

<input checked="" type="checkbox"/> <b>Fee Transmittal Form</b> <input checked="" type="checkbox"/> <b>Fee Attached</b> <input type="checkbox"/> Amendment/Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> <b>Information Disclosure Statement and Transmittal</b> <input checked="" type="checkbox"/> <b>Cited References (X 23)</b> <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 <input type="checkbox"/> Response to Missing Parts/Incomplete Application	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Request for Corrected Filing Receipt <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation, Change of Correspondence Address <input type="checkbox"/> Declaration <input type="checkbox"/> Statement under 37 CFR 3.73(b) <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC ( <i>Appeal Notice, Brief, Reply Brief</i> ) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> <b>Return Receipt Postcard</b> <input type="checkbox"/> Other Enclosure(s) ( <i>please identify below</i> ): _____ _____ _____ _____
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Remarks

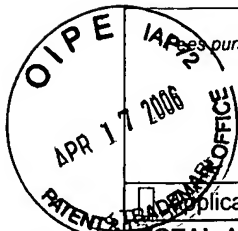
## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Seed Intellectual Property Law Group PLLC	Customer Number	00500
Signature	<i>Mae Joanne Rosok</i>		
Printed Name	Mae Joanne Rosok		
Date	April 17, 2006	Reg. No.	48,903

## CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Signature	*** Sent Via Express Mail ***		
Typed or printed name		Date:	



Filed pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

# FEE TRANSMITTAL

## For FY 2006

### Complete if Known

Application Number	10/706,275
Filing Date	November 13, 2003
First Named Inventor	George H. Lowell
Examiner Name	Nita M. Minnifield
Art Unit	1645
Attorney Docket No.	484112.413

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)**180**

### METHOD OF PAYMENT (check all that apply)

- ☒ Check ☐ Credit Card ☐ Money Order ☐ Other (please identify): \_\_\_\_\_
- ☒ Deposit Account Deposit Account Number: 19-1090 Deposit Account Name: Seed IP Law Group PLLC
- For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)
- ☐ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, **except for the filing fee**
- ☐ Charge any additional fee(s) or underpayments ☒ Charge any underpayments or credit any overpayments of fee(s) under 37 CFR 1.16 and 1.17

Warning: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

### FEE CALCULATION (All the fees below are due upon filing or may be subject to a surcharge.)

#### 1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	<u>Small Entity</u>	Fee (\$)	<u>Small Entity</u>	Fee (\$)	<u>Small Entity</u>	
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Provisional	200	100	0	0	0	0	_____

#### 2. EXCESS CLAIM FEES

Fee Description	Fee (\$)	<u>Small Entity</u>
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims
_____ -20 or HP = _____	X	_____	_____	Fee (\$)
				Fee Paid (\$)

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
_____ -3 or HP = _____	X	_____	_____

HP = highest number of independent claims paid for, if greater than 3.

#### 3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)) the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
_____ -100 = _____	/50 = _____	_____ (round up to a whole number)	x _____	_____

#### 4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Surcharge - IDS

**180**

#### SUBMITTED BY

Signature	<i>Mae Joanne Rosok</i>	Registration No. (Attorney/Agent)	48,903	Telephone	206-622-4900
Name (Print/Type)	Mae Joanne Rosok	Date	April 17, 2006		



PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : George H. Lowell et al.  
Application No. : 10/706,275  
Filed : November 13, 2003  
For : VACCINE

Examiner : Nita M. Minnifield  
Art Unit : 1645  
Docket No. : 484112.413  
Date : April 17, 2003

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

Commissioner for Patents:

In accordance with 37 C.F.R. §§ 1.56 and 1.97 through 1.98, applicants wish to make known to the U.S. Patent and Trademark Office the references set forth on the attached Information Disclosure Statement. Copies of cited U.S. patents and published patent applications are not required and accordingly have not been provided. Copies of any other cited references are enclosed. As to any reference cited, applicants do not admit that it is "prior art" under 35 U.S.C. §§ 102 or 103, and specifically reserve the right to traverse or antedate any such reference, as by a showing under 37 C.F.R. § 1.131 or other method. Although the aforesaid references are made known to the Patent and Trademark Office in compliance with applicants' duty to disclose all information they are aware of which is believed relevant to the examination of the above-identified application, applicants believe that their invention is patentable.

Please acknowledge receipt of this Information Disclosure Statement and kindly make the cited references of record in the above-identified application.

04/19/2006 SFELEKE1 00000005 10706275

01 FC:1806

180.00 0P

A fee of \$180 is submitted in accordance with 37 CFR 1.97(c). The Director is authorized to charge any other fees which may be required, or credit any overpayment to Deposit Account No. 19-1090.

Respectfully submitted,  
Seed Intellectual Property Law Group PLLC



---

Mae Joanne Rosok  
Registration No. 48,903

Enclosures:

Postcard  
Check  
Information Disclosure Statement  
Cited References (X 23)

701 Fifth Avenue, Suite 6300  
Seattle, Washington 98104-7092  
Phone: (206) 622-4900  
Fax: (206) 682-6031



EXPRESS MAIL NO. EV529804626US

Sheet 1 of 3

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEINFORMATION DISCLOSURE STATEMENT  
(Use several sheets if necessary)

ATTY. DOCKET NO.

484112.413

APPLICATION NO.

10/706,275

APPLICANTS

George H. Lowell et al.

FILING DATE

November 13, 2003

GROUP ART UNIT

1645

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	2002/0176863 A1	11/28/02	Dale	424	184.1	
	AB	2002/0086023 A1	07/04/02	Dale	424	178.1	
	AC	2003/0143245 A1	07/31/03	Reddish et al.	424	190.1	
	AD	2003/0157122 A1	08/21/03	Dale	424	190.1	
	AE	2005/0042230 A1	02/24/05	Anderson et al.	424	186.1	
	AF	2005/0063988 A1	03/24/05	Dale	424	190.1	
	AG	2005/0152919 A1	07/14/05	Ward et al.	424	212.1	
	AH	2005/0202037 A1	09/15/05	Dale	424	190.1	
	AI	4,454,121	06/12/84	Beachey	424	177	
	AJ	4,521,334	06/04/85	Beachey	260	112.5	
	AK	4,597,967	07/01/86	Beachey	424	88	
	AL	4,695,562	09/22/87	Beachey et al.	514	13	
	AM	4,705,684	11/10/87	Beachey	424	88	
	AN	4,728,639	03/01/88	Beachey	514	12	
	AO	4,919,930	04/24/90	Beachey et al.	424	88	
	AP	5,124,153	06/23/92	Beachey et al.	424	93P	
	AQ	5,162,226	11/10/92	Beachey et al.	435	252.3	
	AR	5,985,284	11/16/99	Lowell	424	234.1	

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
					YES	NO
	AS					

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

	AT	
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EXAMINER

DATE CONSIDERED

\* EXAMINER: Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s).

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  <b>INFORMATION DISCLOSURE STATEMENT</b> (Use several sheets if necessary)				ATTY. DOCKET NO. <b>484112.413</b>		APPLICATION NO. <b>10/706,275</b>	
				APPLICANTS <b>George H. Lowell et al.</b>			
				FILING DATE <b>November 13, 2003</b>		GROUP ART UNIT <b>1645</b>	

U.S. PATENT DOCUMENTS							
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	BA	6,716,433 B1	04/06/04	Dale	424	244.1	
	BB	6,743,900 B2	06/01/04	Burt et al.	530	414	

FOREIGN PATENT DOCUMENTS						
		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
					YES	NO
	BC	EP 0 305 279 A1	03/01/89	EPO		
	BD	WO 98/01558 A2	01/15/98	PCT		
	BE	WO 99/13084 A1	03/18/99	PCT		
	BF	WO 00/37648 A1	06/29/00	PCT		
	BG	WO 00/40729 A1	07/13/00	PCT		
	BH	WO 01/60402 A2	08/23/01	PCT		
	BI	WO 02/057315 A2	07/25/02	PCT		
	BJ	WO 03/065973 A2	08/14/03	PCT		
	BK	WO 2004/098636 A2	11/18/04	PCT		
	BL	WO 2005/007189 A1	01/27/05	PCT		
	BM	WO 2005/027964 A1	03/31/05	PCT		
	BN	WO 2005/042017 A1	05/12/05	PCT		

OTHER PRIOR ART <small>(Including Author, Title, Date, Pertinent Pages, Etc.)</small>		
	BO	Bronze, M. S. et al., "Epitopes of group A streptococcal M protein that evoke cross-protective local immune responses," <i>The Journal of Immunology</i> , 148(3):888-893, February 1, 1992.
	BP	Cartwright, K., "Group A streptococcal infections in humans," <i>Journal of Applied Microbiology Symposium</i> , 83(Suppl.):52S-61S, 1997.
	BQ	Guzman, C. A. et al., "Protective immune response against <i>Streptococcus pyogenes</i> in mice after intranasal vaccination with Fibronectin-Binding protein SfbI," <i>The Journal of Infectious Diseases</i> , 179(4):901-906, April 1999.

EXAMINER	DATE CONSIDERED
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U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  <b>INFORMATION DISCLOSURE STATEMENT</b> (Use several sheets if necessary)				ATTY. DOCKET NO. <b>484112.413</b>		APPLICATION NO. <b>10/706,275</b>	
				APPLICANTS <b>George H. Lowell et al.</b>			
				FILING DATE <b>November 13, 2003</b>		GROUP ART UNIT <b>1645</b>	
<b>U.S. PATENT DOCUMENTS</b>							
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	CA						
<b>FOREIGN PATENT DOCUMENTS</b>							
		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION		
					YES	NO	
	CB						
<b>OTHER PRIOR ART</b> (Including Author, Title, Date, Pertinent Pages, Etc.)							
	CC	Janulczyk, R. et al., "Identification and characterization of a <i>Streptococcus pyogenes</i> ABC transporter with multiple specificity for metal cations," <i>Molecular Microbiology</i> , 34(3):596-606, 1999.					
	CD	Ji, Y. et al., "Intranasal immunization with C5a peptidase prevents nasopharyngeal colonization of mice by group A <i>Streptococcus</i> ," <i>Infection and Immunity</i> , 65(6):2080-2087, June 1997.					
	CE	Johnsson, E. et al., "Role of hypervariable region in streptococcal M proteins: Binding of a human complement inhibitor," <i>The Journal of Immunology</i> , 161(9):4894-4901, 1998.					
	CF	Kehoe, M. A. et al., "Horizontal gene transfer among group A streptococci: implications for pathogenesis and epidemiology," <i>Trends in Microbiology</i> , 4(11):436-443, November 1996.					
	CG	Lowell, G. H. et al., "Proteosome and hydrophobic foot vaccines provide enhanced immunogenicity of malaria, trypanosome, and streptococcal peptides without added adjuvants," <i>Technological Advances in Vaccine Development</i> , (L. Lasky Ed., Alan R. Liss, N.) pp. 423-432, 1988					
	CH	Pruksakorn, S. et al., "Identification of T-cell autoepitopes that cross-react with the C- terminal segment of the M protein of group A streptococci," <i>International Immunology</i> , 6(8):1235-1244, 1994.					
	CI	Pruksakorn, S. et al., "Towards a vaccine for rheumatic fever: identification of a conserved target epitope on M protein of group A streptococci," <i>The Lancet</i> , 344:639-642, September 3, 1994.					
	CJ	Robinson, J. H. and Kehoe, M. A., "Group A streptococcal M proteins: virulence factors and protective antigens," <i>Immunology Today</i> , 13(9):362-367, 1992.					
	CK						
	CL						
<b>EXAMINER</b>				<b>DATE CONSIDERED</b>			
* EXAMINER: Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance <u>and</u> not considered. Include copy of this form with next communication to applicant(s).							